

START

0018688

DETERMINATION OF NONSIGNIFICANCE

Description of proposal The 183-H Solar Evaporation Basins, an inactive dangerous waste management facility, will undergo closure to reduce or eliminate threats to human health and the environment.

Proponent U.S. Department of Energy

Location of proposal, including street address, if any The basins are in the 100-H Area of the Hanford Facility. More specifically, the basins can be located on the Locke Island, Washington, Quadrangle Map: NE ¼, SW ¼, NE ¼, Section 18, T14N, R27E of the Willamette Principle Meridian..

Lead agency State of Washington Department of Ecology

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

☐ There is no comment period for this DNS.

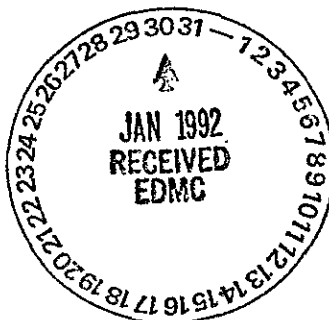
☒ This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date below. Comments must be submitted by February, 21 1992

Responsible official Mr. Roger Stanley

Position/title Nuclear and Mixed Waste Program Manager **Phone** (206)438-7020

Address State of Washington Department of Ecology, N&MWM Program,
P.O. Box 47600, Olympia, Washington 98504-7600

Date 1/13/92 **Signature** Roger Stanley



A. BACKGROUND

1. Name of proposed project:

Closure of the 183-H Solar Evaporation Basins (183-H Basins).

Information contained in this checklist pertains to only the 183-H Basins. In the context of the document, 'site' refers to only the physical concrete structures of the 183-H Basins, whereas 'Site' refers to the Hanford Site.

2. Name of applicants:

U.S. Department of Energy, Richland Operations (DOE-RL) and
Westinghouse Hanford Company (WHC)

3. Address and phone number of applicants and contact persons:

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

Contact Persons:

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Environmental Restoration Division
(509) 376-5441

R. E. Lerch, Manager
Environmental Division
(509) 376-5556

4. Date checklist prepared:

February 26, 1990

5. Agency requesting the checklist:

State of Washington
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711

6. Proposed timing or schedule (include phasing, if applicable):

If the 183-H Basins are closed with contaminated subsoils remaining in place (checklist question A.11.), emplacement of the landfill cover is expected to be completed in October 1992. This action will coincide with final closure of the facility. Post-closure monitoring of the landfill facility and the groundwater under the facility will continue for up to 30 years after closure or as directed by the Washington State Department of Ecology (Ecology) [WAC 173-303-610(7)].

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

The 183-H Basins will be permanently closed to waste receipt pending the approval of the Closure/Post-Closure Plan, which is being submitted to Ecology concurrently with this checklist. Post-closure activities will be conducted at the site per the Post-Closure Permit, to be issued by Ecology.

The distribution and concentrations of contaminants in the 100-H Area groundwater indicate that the 183-H Basins are only one of several possible sources of groundwater contamination in the 100-H Area. Thus groundwater investigations must be conducted in conjunction with investigations of other contamination sources. All 100-H Area inactive facilities, including the 183-H Basins, are designated for soil and groundwater investigation/remediation activities as part of the inactive sites-operable units process. Any corrective actions required during the post-closure care period will be addressed through the inactive sites-operable units process. When the detailed groundwater and waste source operable unit remediation plans are finalized, the plans will integrate the 183-H Basins' groundwater monitoring and soil characterization information with similar data from related sites. The remediation plan will identify the mechanism for initiating the preferred groundwater remediation alternative, as well as any possible contingency actions.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- The 183-H Basins and the groundwater beneath the basins are to be discussed in the Remedial Investigation/Feasibility Study (RI/FS) Work Plans for the 100-HR-1 and 100-HR-3 Operable Units, respectively.
- The *183-H Solar Evaporation Basins Final Status Post-Closure Permit Application* (DOE/RL 88-09) (FSPCPA) was submitted to Ecology in June 1988. Ecology's Notice of Deficiency is anticipated for the Fall of 1990.
- This SEPA checklist is being submitted concurrently with the *183-H Solar Evaporation Basins Closure/Post-Closure Plan* (Rev. 2).
- A NEPA memorandum to File (accompanied by a DOE-RL environmental evaluation and a NEPA checklist) was prepared in accordance with DOE NEPA guidelines.

Additional environmental information regarding the 100-H Area and the Hanford Site, in general, can be found in the U.S. Department of Energy *Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes* (DOE/EIS-0113), released in 1987, in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Pacific Northwest Laboratory,

1998, Richland, Washington), and in the *Draft Environmental Impact Statement-Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland, Washington*, DOE/EIS-0119D (U.S. Department of Energy, 1989, Washington, D.C.).

9. Do you know whether applications are pending for government approvals of other proposals directly affecting property covered by your proposal? If yes, explain.

Both the Closure/Post-Closure Plan and the Final Status Post-Closure Permit Application must be approved by the regulating agencies [Ecology and the Environmental Protection Agency (EPA)]. Ecology must issue a permit before activities described in the Final Status Post-Closure Permit Application may begin. In addition, the 183-H Basins have been identified as a waste source in the Hanford Site 100-H Area Aggregate Operable Units, nominated to the National Priorities List (NPL) of federal facilities requiring remedial action and regulation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

10. List any government approvals or permits that will be needed for your proposal, if known.

Ecology and the EPA are the only agencies authorized to approve or permit final closure of the facility under requirements authorized by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, and Chapter 173-303 of the Washington Administrative Code. No other permits are required.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The 183-H Basins site description is provided in the answer to checklist question B.8.c. The 183-H Basins will be decontaminated in preparation for final facility closure. Liquid waste and waste sludge have been removed from the 183-H Basin floors and walls, packaged within the confines of the basins, and shipped off-site. After removal of the packaged waste, the facility walls and floors will be tested for dangerous waste constituents. Both shallow and deep soil samples will be taken from beneath the basin floors and surrounding the outside basin perimeter. In addition, background soil samples will be collected for comparison with these soil samples. The soil samples will be used to define the extent and magnitude of the contamination plume in the vadose zone beneath the basins. Following soil sampling, the facility will be demolished. Clean rubble generated during demolition of the basins will be placed in an adjacent subsurface facility, which will then be filled to ground level with clean soil. However, if traces of hazardous material

1 remain after successive decontamination attempts, the facility will be
2 demolished and compacted for in situ disposal.

3
4 The results of the soil sampling effort will be used to assess
5 closure options as specified under EPA RCRA regulations
6 40 CFR 265.197(a) and (b). Under current regulations, two options are
7 available: clean closure, or removal and disposal of all soils
8 contaminated above background concentrations; and landfill closure, or
9 in place disposal of contaminated soils in a monitored landfill. The
10 landfill closure option may be exercised only if clean closure can be
11 demonstrated to be impracticable. Landfill closure may still require
12 partial removal of contaminated soils, particularly if such soils are
13 designated extremely hazardous waste (EHW) under Chapter 173-303 of
14 the Washington State Administrative Code.

15
16 If at closure waste material remains in situ, regulations require the
17 installation of a multilayer earthen cover to minimize water intrusion
18 to the underlying contaminants. The cover, as designed for
19 calculation purposes, will measure approximately 140 feet by 230 feet
20 (actual dimensions will be dependent on the extent of the plume of
21 contamination). The landfill cover will have a total thickness of
22 about seven feet, encompassing four earthen layers (topsoil, sandy
23 drainage layer, low permeability soil layer, and foundation soil
24 layer) and two geosynthetic fabric layers. The final cover will be
25 seeded with grass species that grow well in the semiarid climate at
26 the Hanford Site. It is anticipated that the grasses will remove
27 moisture from the soil through evapotranspiration and that, due to the
28 construction criteria of the final cover, any other moisture present
29 in the cover will be limited to the uppermost soil layer.

30
31 Following installation of the final cover, a chain link fence will be
32 erected to surround the entire perimeter. The fence will remain
33 locked at all times, except when personnel need access to conduct
34 monitoring and sampling of groundwater, inspections, or necessary
35 repairs. The closed facility will meet all applicable closure
36 requirements as set forth in the issued permit.

37
38 Groundwater monitoring activities will be conducted at the 183-H
39 Basins throughout the post-closure monitoring period. Closure of the
40 183-H Basins will be performed in a manner that minimizes potential
41 future impacts to human health and the environment.

- 42
43 12. Give the location of the proposal. Give sufficient information for a
44 person to understand the precise location of your proposed project,
45 including a street address, if any, and section, township, and range,
46 if known. If a proposal would occur over a range of area, provide the
47 range or boundaries of the site(s). Provide a legal description,
48 site plan, vicinity map, and topographic map, if reasonably
49 available. While you should submit any plans required by the agency,
50 you are not required to duplicate maps or detailed plans submitted
51 with any permit applications related to this checklist.
52

The 183-H Solar Evaporation Basins are in the 100-H Area in the northern part of the Hanford Site. Maps and plans of the 100-H Area are contained in Appendix A of the revised closure plan submitted with this checklist. The basins can be located on the Locke Island, Washington, Quadrangle Map: NE 1/4, SW 1/4, NE 1/4, Section 18, T14N, R27E of the Willamette Principle Meridian.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site: Flat, rolling, hilly, steep slopes, mountainous, other.

Flat.

- b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land around the 183-H Basins is less than two percent.

- c. What general types of soils are found on the site (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The soil at the 183-H Basins site is sandy gravel. Surficial sediments consist of eolian silt and fine sands (loess). No farming is permitted on the Hanford Site.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of fill.

If closure is conducted with contaminants remaining in situ, an engineered barrier (cover) is required by regulations to be placed over waste zones remaining at the facility upon closure. The designed cover will minimize water infiltration into underlying waste zones where contaminants may be leached into the groundwater. A brief description of this cover, as presently designed, follows. A more detailed description appears in the closure plan.

The lower-most component of the landfill cover will be a one-foot thick foundation layer, which will require about 1,200 cubic yards of sandy soil. The foundation layer will function to fill low spots and voids on the surface of the site, thus providing a

level and stable base for the overlying cover components. No borrow site has been chosen yet for this soil.

Above the foundation layer will be a two-foot thick, low-permeability soil layer, composed of a mixture of 15% bentonite (about 400 cubic yards of material) and 85% native soil (about 2,500 cubic yards of material). An impermeable geomembrane will be placed above and in direct contact with the low-permeability soil, and this geomembrane/clay layer will be overlain by a one-foot thick sand drainage layer requiring approximately 1,500 cubic yards of material. Surface water infiltrating to the highly permeable sand drainage layer will be laterally channeled to the edges of the cover within the drainage layer and prevented from percolating deeper into the cover by the geomembrane/clay layer. As yet no borrow site has been chosen for the earthen components of these two layers.

A woven synthetic geotextile fabric will be placed on the sand drainage layer. The geotextile fabric will serve two functions: 1) to protect the sand drainage layer during construction of the cover, and 2) to provide a particle filtration function to prevent the infiltration of fines into the sand drainage layer, thus preventing clogging of that layer.

Overlying the geotextile fabric, the top soil of the final cover will consist of a three-foot deep revegetated soil (sandy silt to silt). The top soil will provide storage for annual precipitation and support the establishment and growth of a perennial grass cover that will stabilize the surface of the cover and enhance soil-water removal. Approximately 3,400 cubic yards of topsoil will be required. The most promising borrow site identified thus far is the McGee Ranch near the northwest corner of the Hanford Site.

A cobble filter layer and overlying cobble layer will be placed on the cover embankment slopes and two feet horizontally onto the cover beyond the upper edge of the embankment. The cobble filter layer, requiring approximately 505 cubic yards of fine gravel to coarse sand, will serve to stabilize the overlying two-foot thick cobble layer. This cobble layer will function as a protective component of the cover, providing erosion resistance (and thereby enabling a steeper side slope design) and helping to reduce the potential of small animal intrusion through the embankment side slopes.

- f. Could erosion occur as a result of clearing, construction, or use? If so, describe.

The erosion potential of this proposal is minimal. There are three possible sources of erosion damage in the area of the 183-H Basins: flood, wind, and precipitation. The probability of serious damage to the area due to flooding or precipitation is low; the flow in the Hanford Reach of the Columbia River is

controlled by upstream dams, and the basins are above the 100-year floodplain. The combination of semi-arid regional climate, high evapotranspiration rates, and minimal local slope in the vicinity of the proposed project makes damage from all but rare high-intensity rain events unlikely. The potential for erosion from wind and precipitation will be largely offset by mulching practices and the establishment of a perennial grass cover over the closed facility.

- g. Approximately what percentage of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Closure of the 183-H Basins with contaminants remaining in place will require the installation of an earthen cover designed to minimize, if not eliminate, water infiltration to the underlying waste zones (checklist question B.1.e.). One hundred percent of the original basin area will be capped by the designed cover. The site will be revegetated as part of the cover installation.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if there are any?

If the 183-H Basins are clean closed, the uppermost surface slope of the project site will be leveled to equal that of the surrounding area and revegetated. A straw mulch will be applied to assist in erosion control prior to the establishment of perennial grasses. Closure of the basins with waste buried in place will require installation of a final cover, which will be similarly revegetated to halt minor erosional damage to the area. Earthen materials for constructing the landfill cover will be taken from existing borrow areas to the extent practical. Regular inspections of the cover and revegetated areas will be accomplished and corrective action taken as necessary throughout the post-closure period.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

Cement dust may be generated during basin decommissioning activities (e.g., wet sandblasting and concrete cutting), but no measurable levels of airborne contaminants are expected to be produced as a result of such activities. Heavy equipment used to construct the final cover and trucks transporting material from the facility will generate dust and gaseous (exhaust) emissions. After physical closure of the facility, automobile exhaust will be generated as a result of inspection and maintenance activities.

- b. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any?

In order to reduce the amount of dust generated during closure activities, water trucks will be available onsite that will periodically spray the affected area. Water will be used during wet sandblasting to minimize dust generation. Continuous air monitors will be utilized during basin decommissioning activities to detect dangerous and radioactive particulate matter.

3. Water

a. Surface

- 1) Is there any surface water body in or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

At the closest point, the 183-H Solar Evaporation Basins are approximately 550 feet from the Columbia River, the nearest natural watercourse.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet of) the described waters?

Several existing groundwater monitoring wells lie between the 183-H Basins and the Columbia River. The well closest to the river lies approximately 100 feet from the water's edge. Available plans are included in the *183-H Solar Evaporation Basins Closure/Post-Closure Plan* (Rev. 2), with which this checklist is being submitted.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill.

None.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Untreated river water may be sprayed on the ground during construction activities to mitigate dust generation.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground

1) Will groundwater be withdrawn, or will water be discharged to groundwater?

Storm run-off water from the earthen landfill cover will be absorbed by the surrounding soil and may eventually enter the groundwater.

Groundwater samples are collected on a regular basis from the monitoring wells surrounding the 183-H Basins. Samples are withdrawn to obtain data necessary to comply with state and federal groundwater monitoring requirements.

Prior to sample collection, wells are purged per the sample collection procedure corresponding to the type of dedicated pump(s) installed in the well. The total volume of groundwater withdrawn for purging and sampling will depend on the conditions encountered and the needs at each well. Withdrawals for groundwater monitoring purposes will not exceed 5,000 gallons per day.

Present policy dictates the collection and storage of purgewater from the 183-H Basins monitoring wells. This purgewater, instead of fresh clean water, has been used for washing down the solidification process equipment. Purgewater so used has been containerized and solidified for disposal as liquid waste. After completion of the decontamination of the 183-H Basins, remaining and new purgewater will be collected, stored, and treated with the other Hanford Site purgewater. The ultimate disposition of purgewater will pose no hazard to human health or the environment.

2) Describe waste materials that will be discharged into the ground from septic waste tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

c. Water Run-off (including storm water)

- 1) Describe the source of run-off (including storm water) and methods of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other wastes? If so, describe.

Run-off collection and disposal methods will be necessary only in the event of a severe rain fall or heavy snow melt. The landfill cover will be equipped with drainage pipes extending from the highly permeable drainage layer to drainage ditches at the edges of the cover. The outflow of run-off water will be to the surface, oriented down gradient toward the Columbia River. It is anticipated that the final facility cover, vegetation, and the relatively flat topography of the area will preclude excessive run-off from reaching the river. Run-off will be absorbed by the surrounding soil and no other form of run-off collection system is currently under consideration. The run-off that might occur will not flow into any other wastes.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

Beneath the 183-H Basins a plume of contamination extends through the soil column to the groundwater. If significant quantities of water were to transect the soils beneath the final facility cover, leachate from in situ contaminants could enter the groundwater. However, the final facility cover will be constructed so as to minimize, if not eliminate, the intrusion to the soil column of water from severe rain events and sudden snow melt-off.

d. Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

During 183-H Basins decommissioning, (part of the closure operations), liquid wastes and waste sludges have been removed from the 183-H Basins. Waste sludges have been commingled with sufficient quantities of absorbent material to ensure that no free liquid remains in the waste drums. Liquid wastes have been containerized and solidified within the confines of the basin. 183-H Basins waste removal and decontamination operations are being conducted within the confines of the basins to prevent accidental releases to the environment. At no time will there be a potential for the discharge of waste materials directly to the ground.

Post-closure leaching of contaminated subsoils by surface water will be prevented by the installation of a multilayered barrier (the final cover) designed to preclude the migration of surface

water to underlying contaminated soils. Proposed measures to reduce soil and groundwater contamination (discussed in the answer to checklist question B.3.c.2) are addressed in the Final Status Post-Closure Permit Application.

4. Plants

a. Check the types of vegetation found onsite.

- ☐ deciduous tree
- ☐ evergreen tree
- ☐ shrubs
- ☐ grass
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants
- ☐ water plants
- ☐ other types of vegetation

There is no vegetation on the actual 183-H site. Additional information on the Hanford Site environment can be found in the final environmental impact statements referenced in the answer to checklist question A.8.

b. What kind and amount of vegetation will be removed or altered?

A small vegetated area adjacent to the basins may be affected by closure activities. All areas denuded of vegetation as a result of this project will be revegetated appropriately.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species exist on or in the immediate vicinity of the 183-H Basin site. Additional information on the Hanford Site environment can be found in the final environmental impact statements referenced in the answer to checklist question A.8.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Perennial grass species well suited to the local climate will be used to revegetate the cover of the 183-H Basins.

5. Animals

a. Identify any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other
mammals: deer, bear, elk, beaver, other
fish: bass, salmon, trout, herring, shellfish, other

1
2 A variety of insects, birds, and small mammals common to the
3 Hanford Site (including grasshoppers, passerine birds, pigeons,
4 lagomorphs, and coyote), have been observed in the vicinity of
5 the 183-H Basins. Prior to initiation of basin decommissioning
6 activities, a number of swallow nests were encountered within
7 the basins. Additional information on the Hanford Site
8 environment can be found in the final environmental impact
9 statements referenced in the answer to checklist question A.8.
10

- 11 b. List any threatened or endangered species known to be on or near
12 the site.
13

14 No threatened or endangered species are known to exist on the
15 facility site. However, the state- and federally-registered
16 threatened bald eagle is a common winter resident along the
17 Columbia River. The only two endangered animal species known to
18 occur in the area -- the American white pelican and the peregrine
19 falcon -- are transient visitors. Additional information on the
20 Hanford Site environment can be found in the final environmental
21 impact statements referenced in the answer to checklist
22 question A.8.
23

- 24 c. Is the site part of a migration route? If so, explain.
25

26 No; however, the adjacent Columbia River is considered an
27 important resting place for Pacific flyway waterfowl and shore
28 birds during the autumn migration. Additional information on the
29 Hanford Site environment can be found in the final environmental
30 impact statements referenced in the answer to checklist
31 question A.8.
32

- 33 d. Proposed measures to preserve or enhance wildlife, if any:
34

35 None at this time.
36

37 6. Energy and Natural Resources
38

- 39 a. What kinds of energy (electric, natural gas, oil, wood stove,
40 solar) will be used to meet the completed project's energy
41 needs? Describe whether it will be used for heating,
42 manufacturing, etc.
43

44 The completed project will require the use of portable electric
45 generators for powering groundwater monitoring well pumps during
46 inspection and sampling. Post-closure monitoring activities will
47 require the use of petroleum products to power motor vehicles.
48

- 49 b. Would your project affect the potential use of solar energy by
50 adjacent properties? If so, generally describe.
51

52 No.
53

9 2 1 2 4 1 5 2 0

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

During the decontamination phase of the project, decontamination and monitoring equipment may be exposed to chemically hazardous and radioactively contaminated materials from the 183-H Basins sludges and liquids. Purgewater produced during closure and post-closure groundwater monitoring activities may contain very low concentrations of hazardous and/or radioactive wastes. Closure of the 183-H Basins will be performed in a manner that minimizes potential future impacts to human health and the environment.

- 1) Describe special emergency services that might be required.

Hanford Site security, fire response, and ambulance services are on call at all times in the event of an onsite emergency.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

During decontamination proceedings, all equipment decontamination solutions and emergency shower effluent will be retained within the 183-H Basins for collection and packaging. Sludge waste has been commingled with sufficient quantities of absorbent material to ensure that no free liquid remains in the waste drums, and liquid waste have been containerized and solidified within the confines of the 183-H Basins. All waste removal operations will be conducted within the confines of the 183-H Basins to prevent accidental releases to the environment. At no time will there be a potential for the discharge of waste materials directly to the ground.

Waste material, decontamination solutions, and clean-up debris will be collected, packaged (as applicable), and transferred to the appropriate facilities as follows:

- Radioactive mixed waste will be transported to the 200 Area Radioactive Mixed Waste Storage Facility;

- Nonradioactive hazardous waste will be transported to the 600 Area Nonradioactive Dangerous Waste Storage Facility (the 616 Building);
- Nonhazardous radioactive waste will be transported to the 200 Area Low-Level Waste Burial Grounds.

Once physical closure of the basins is complete, no exposure to personnel is expected; however, post-closure monitoring, sampling, and inspection personnel will be required to wear appropriate protective clothing while at the site. Personnel will be trained to recognize and correct/reduce any environmental health hazards. Training requirements are fully described in the Closure/Post-Closure Plan. The physical security of a chain link fence around the basins and access limited to only authorized personnel will further reduce potential exposures.

b. Noise

- 1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, etc.)?

None.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, etc.)? Indicate what hours noise would come from the site.

Construction activities will temporarily increase noise levels during normal day-shift hours. On completion of the project, the only noise generated will be that of the portable generators used to power groundwater well sampling and monitoring equipment.

- 3) Proposed measures to reduce or control noise impacts, if any:

Construction equipment will meet manufacturer's requirements for noise suppression.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties?

The 183-H Basins are part of the Hanford Site which is owned by the U.S. Government. The basins were utilized for waste reduction via the natural process of liquid evaporation. No dangerous waste shipments have been received since November 1985.

b. Has the site been used for agriculture? If so, describe.

No portion of the Hanford Site (including the 183-H Basins) has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

The 183-H Basins are composed of four contiguous concrete holding basins. The basins are above-ground structures, each containing a deep sedimentation basin and a shallow flocculation basin. The sedimentation basins are a nominal 53 feet-6 inches wide and 95 feet in length, with a depth varying from 16 feet-6 inches at the north end to 15 feet-6 inches at the south end. The flocculation basins, at the north end of and within the long boundaries of the sedimentation basins, are 45 feet-6 inches wide, 33 feet in length, and 9 feet-6 inches deep.

Approximately 45 feet to the south of and parallel to the 183-H Basins are the 183-H Clear Water Reservoirs (clearwells). These subsurface structures are a total of 858 feet long, east to west, (parallel to the 183-H Basins) and 184 feet wide, north to south. The clearwells were used as a reservoir for treated river water intake to the 105-H Reactor, which was deactivated in April 1965. Since that time, the clearwells have been used as a collection site for clean (nonregulated) waste materials.

d. Will any structures be demolished? If so, what?

During the closure process, the 183-H Basins will be demolished. Clean rubble generated during demolition of the basins will be placed in the adjacent clearwells, which will then be filled to ground level with clean soil. However, if traces of dangerous material remain after successive decontamination attempts, the rubble will be compacted for in situ disposal beneath the earthen cover described in the answer to checklist question B.1.e.

e. What is the current zoning classification of the site?

The Hanford Site is zoned by Benton County as an Unclassified Use (U) district.

f. What is the current comprehensive plan designation of the site?

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the 'Hanford Reservation.' Under this designation, land on the Site may be used for "activities nuclear in nature." Non-nuclear activities are authorized "if and when DOE approval for such activities is obtained."

g. If applicable, what is the current master shoreline program designation of the site?

Does not apply.

- h. Has any part of the site been classified as an 'environmentally sensitive' area? If so, specify.

No.

- i. Approximately how many people would reside or work in the completed project?

None.

- j. Approximately how many people would the completed project replace?

None.

- k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply. (See answer to checklist question B.8.f.)

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high-, middle-, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Closure of the basins with waste in place will require the installation of an earthen cover. The cover, as designed, will have a maximum height of approximately nine feet at the crest. The chain link perimeter fence around the 183-H Basins may attain a height of ten feet.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None at this time.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

Does not apply.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?

Does not apply.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No part of the 183-H Basins is listed on or proposed for inclusion on preservation registers. Additional information on the Hanford Site environment can be found in the environmental impact statements referenced in the answer to checklist question A.8.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

The Hanford Cultural Resource Laboratory conducted a cultural resource review in the project area, and reported that no cultural properties are known to be located on the site of the 183-H Basins or in the area from which background samples will be taken. Additional information on the Hanford Site environment can be found in the environmental impact statements referenced in the answer to checklist question A.8.

- c. Proposed measures to reduce or control impacts, if any:

If the 183-H Basins are clean closed, contaminated soils will be excavated and removed from the site as necessary. Backfill and soils to be used in the earthen cover will be excavated from borrow sites around the Hanford Site. Prior to any excavation proceedings, a cultural resources review will be conducted under the authority of the National Historic Preservation Act. Significant archaeological finds may result in schedule delays until a plan to mitigate excavation impacts can be devised and implemented.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

None.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The facility is not publicly accessible and, therefore, is not served by public transit.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None.

- g. Proposed measures to reduce or control transportation impacts, if any:

Does not apply.

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any:

Does not apply.

16. Utilities

- a. List utilities currently available at the site (electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, etc.):

The only utility currently available at the site is fresh water.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.


A portable air supply for pneumatically operated equipment and a portable electrical generator will be necessary for closure

1 operations. Water trucks will be available onsite to
2 periodically spray the area, reducing airborne particles
3 generated during construction activities. After final closure of
4 the facility, the only utility necessary for operation will be
5 portable electric generators for powering groundwater monitoring
6 well pumps during inspection and sampling.
7

8 General construction activities are outlined in the answer to
9 checklist question A.11.
10

11 SIGNATURES
12
13

14 The above answers are true and complete to the best of my
15 knowledge. We understand that the lead agency is relying on them
16 to make its decision.
17

18
19
20
21 
22 _____
23 R. D. Izatt, Director
24 Environmental Restoration Division
25 U.S. Department of Energy
26 Richland Operations Office
27

4/11/90

Date

28
29
30 
31 _____
32 R. E. Lerch, Manager
33 Environmental Division
Westinghouse Hanford Company

3-22-90

Date

9 2 1 2 4 1 5 1 5 2 3